

Notice of Allowability

Application No.

10/791,479

Applicant(s)

MAEDA ET AL

Examiner

Gary J. Portka

Art Unit

2188

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment submitted May 1, 2006.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date ATTACHED |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Carl Brundidge on June 9, 2006.

The application has been amended as follows:

In the claims:

1. A disk array device comprising:
 - a plurality of hard disk drives;
 - at least one channel control section having a plurality of ports that are connectable to at least one information processing device via cables, and that receives data input/output requests from the at least one information processing device to the plurality of hard disk drives;
 - at least one disk control section that is communicatably connected to the plurality of hard disk drives and that sends data input/output requests to the plurality of hard disk drives based on the data input/output requests to the plurality of hard disk drives that are received by the at least one channel control section; and
 - a shared memory that is accessible by the at least one channel control section and the at least one disk control section for reading and writing data therein,

wherein the shared memory stores a port control table that sets control information indicating whether the plurality of ports are permitted for use, and the at least one channel control section refers to the control information set in the port control table, and

wherein the number of ports in use is compared to the number of ports available for use;

wherein when the number of ports in use is less than the number of ports available for use, the at least one channel control section responds to a connection request received from the at least one information processing device, and when the number of ports in use is equal to the number of ports available for use, the at least one channel control section does not respond to the connection request.

17. A method for controlling a disk array device, the disk array device comprising a plurality of hard disk drives, at least one channel control section having a plurality of ports that are connectable to at least one information processing device via cables, and that receives a data input/output request from the at least one information processing device to the plurality of hard disk drives, at least one disk control section that is communicatably connected to the plurality of hard disk drives and that sends a data input/output request to the plurality of hard disk drives based on the data input/output request to the plurality of hard disk drives that is received by the at least one channel control section, and a shared memory that is accessible by the at least one channel control section and the at least one disk control section for reading and writing data therein, wherein the shared memory stores a port control table that sets control

information indicating whether the plurality of ports are permitted for use, the method comprising the steps, conducted by the at least one channel control section of:

referring to the control information set in the port control table;

comparing the number of ports in use to the number of ports available for use;

when the number of ports in use is less than the number of ports available for use, responding to a connection request received from the at least one information processing device; and

when the number of ports in use is equal to the number of ports available for use, not responding to the connection request.

Conclusion

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary J. Portka whose telephone number is (571) 272-4211. The examiner can normally be reached on M-F 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on (571) 272-4210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gary J Portka
Primary Examiner
Art Unit 2188

June 12, 2006



GARY PORTKA
PRIMARY EXAMINER